

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/826,471	HOSOYA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Niketa I. Patel	2181	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed on 01/08/2007.
2. ☒ The allowed claim(s) is/are 1,2 and 8-21 (renumbered as 1-16).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
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***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on 01/08/2007 has been entered.

***Drawings***

2. The replacement drawings were received on 10/12/2006. These drawings are acceptable.

***Allowable Subject Matter***

3. Claims 1-2 and 8-21 are allowed.

4. The following is an examiner's statement of reasons for allowance: the prior art of record taken alone and/or in combination with other does not teach and/or fairly suggest the limitation of a disk controller comprising: a channel adapter, a memory adapter, a processor adapter and a switch adapter each include a DMA controller for performing a communication protocol control of an inner network, in combination with other recited limitations.

Dennin et al. US 6,330,626 B1 (hereinafter '*Dennin*') teaches a disk controller comprising a channel adapter, a memory adapter, a processor adapter, a switch adapter as shown in figure 1, however, *Dennin* only teaches a centralized DMA controller (fig. 1, element 134.)

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*Dennin* does not each teach a channel adapter, a memory adapter, a processor adapter and a switch adapter each having a DMA controller.

Ganapathy et al. US 6,874,039 B2 (herein after '*Ganapathy*') teaches system with a distributed DMA where a processor adapter and a host adapter each has a DMA controller, however does not teach a switch adapter and a memory adapter with a DMA controller. Furthermore, the system of *Ganapathy* is not designed for disk controller environment.

Moriuchi US 5,586,127 (hereinafter '*Moriuchi*') teaches a disk controller with a buffer memory controller which, provides a DMA control of the transfers (fig. 1, element 20) however does not disclose a channel adapter, a memory adapter, a processor adapter, a switch adapter each include a DMA controller for performing a communication protocol control of an inner network.

Gunlock et al. US 6,952,734 B1 (hereinafter '*Gunlock*') teaches a packet with destination address, a source address and a sequence field with a task ID (col. 9, lines 56-67) however does not teach a channel adapter, a memory adapter, a processor adapter, a switch adapter each include a DMA controller for performing a communication protocol control of an inner network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (571) 272 4156. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272 4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NP  
01/18/2007

A handwritten signature in black ink, appearing to read "Donald Sparks", is positioned above the printed name and title.

DONALD SPARKS  
SUPERVISORY PATENT EXAMINER